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ABSTRACT

An introduction to the Hupa number system is provided in this workbook, one in a series of numerous materials developed to promote the use of the Hupa language. The book is written in English with Hupa terms used only for the names of numbers. The opening pages present the numbers from 1-10, giving the numeral, the Hupa word, the English word, and an illustration of the number set. Students practice writing the Hupa number names, solve simple addition problems, and write their own addition problems. The same procedure is repeated for numbers from 10-20. Students then practice the Hupa system of combining numbers from 21-99. Illustrations of number sets depict artifacts of Hupa culture. Answers are provided for each of the 18 work pages. A chart of the Hupa Unifon alphabet with computer-generated characters is included. (JHZ)

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Hupa Numbers

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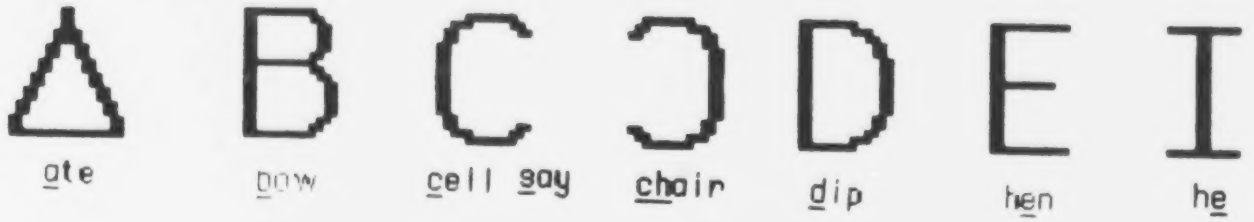
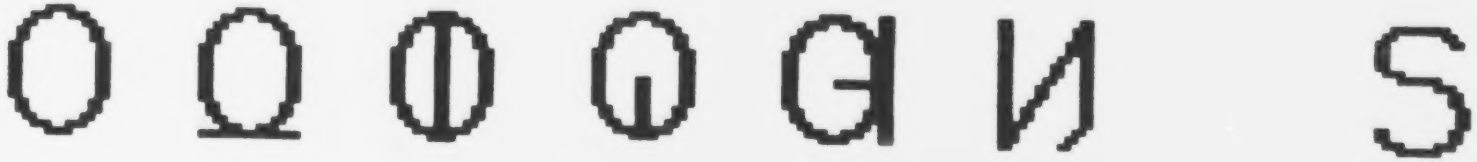
Hupa Unifon

Single Sound Alphabet



ate baw cell say chair dip hen he

law goat hat bit bite kiss low music no



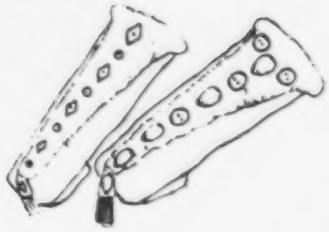
lot old look out boy king sure

table up due wig yes khah ("gargle h") zebra ghah ("gargle g")

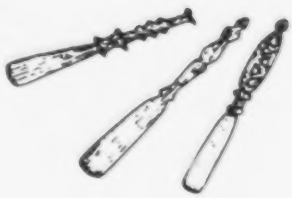
Numbers 1 - 10

1 One HO'

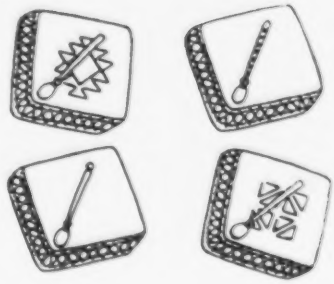
2 Two NOX



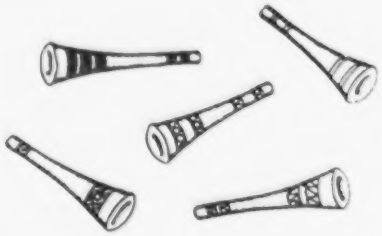
3 Three TOK



4 Four D†ИK



5 Five ƆWO-LO



Practice writing Hupa numbers 1 - 5

1 _____

2 _____

3 _____

4 _____

5 _____

Which is bigger TOK or ƆWΘ-LO ?

Write the bigger one here.

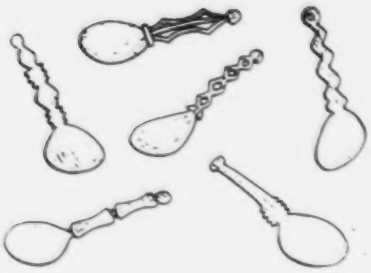
_____

Which is smallest, D†ИK or ⊞O' or NOX ?

Write the smallest one here.

_____

6 Six XOC-TON



7 Seven XΘH-K†T

8 Eight KE-NEM

9 Nine M†-X̄ΘC-TΩ

10 Ten M†И-ЯUИ

Practice writing Hupa numbers 6 - 10

6 _____

7 _____

8 _____

9 _____

10 _____

Which is smaller, XOC-TON or
M+-X̄OC-TO ?

Write the smaller one here.

_____

Which is biggest, XOH-K+T or M+И-ЯUИ
or KE-NEM ?

Write the biggest one here.

_____

8

Practice writing the Hupa names for these numerals:

1 _____

2 _____

3 _____

4 _____

5 _____

6 _____

7 _____

8 _____

9 _____

10 _____

Put these in order, smallest to largest.

ↃWⒹ-LO ⊟O' KE-NEM

_____

_____

_____

M†И-⊟UИ NOX M†-X̄ⒹC-TⓆ

_____

_____

_____

TOK XQC-TON XⒹH-K†T D†ИK

_____

_____

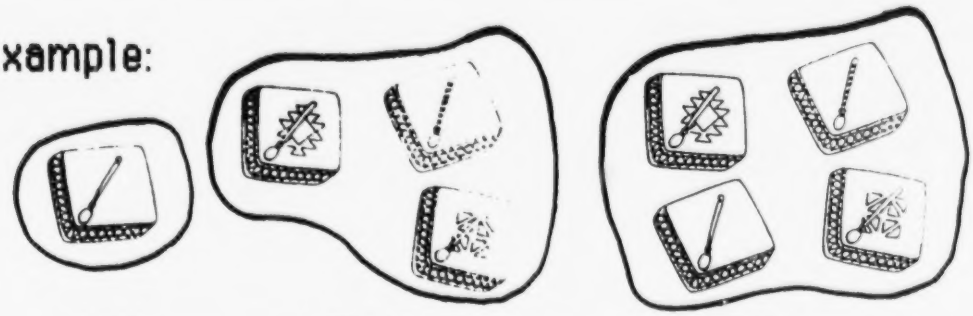
_____

_____

Addition

A group of things that you can count is called a set.
Add these sets together, using Hupa numbers.

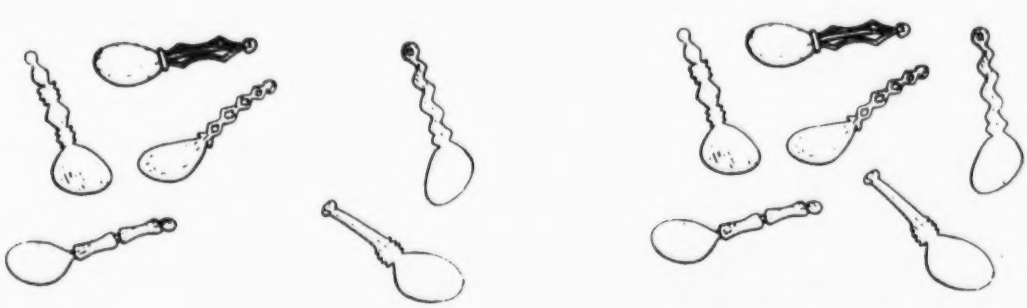
Example:



HO' + TOK = D†ИK

Do these addition problems.

NOX + TOK = _____



D†ИK + NOX = _____

ƆWØ-LO + ƆWØ-LO = _____

HO' + KE-NEM =

_____

DUCK + TOK = _____

HOP + NOX + SNOW-LO =

_____

13

Make up your own addition problems.

_____ + _____

= _____

_____ + _____

= _____

_____ + _____

= _____

Hupa Numbers 10 - 20

The Hupa number for 10 is MɬИ-ꓭUИ. To make the number 11 in Hupa, you say MɬИ-ꓭUИ MŪ-O NO ꓭO' ("ten and one"). Here are the numbers 11 through 19.

11 Eleven MɬИ-ꓭUИ MŪ-O NO ꓭO'

_____

12 Twelve MɬИ-ꓭUИ MŪ-O NO NOX

_____

13 Thirteen MɬИ-ꓭUИ MŪ-O NO TOK

_____

14 Fourteen MɬИ-ꓭUИ MŪ-O NO DɬИK

_____

15 Fifteen MɬИ-ꓭUИ MŪ-O NO ƆWⒹ-LO

_____

16 Sixteen MɬИ-ꓭUИ MŪ-O NO XOC-TON

_____

17 Seventeen

M+И-ꓭUИ MO-O NO XOH-K+T

---

18 Eighteen

M+И-ꓭUИ MO-O NO KE-NEM

---

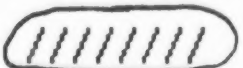
19 Nineteen

M+И-ꓭUИ MO-O NO M+-X̄OC-TW

The Hupa word for twenty is NO D+-M+И-ꓭUИ. Can you figure out how that number is made? (Hint: how many tens are there in twenty?)

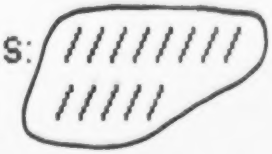
////////// //////////

Here are some addition problems which use Hupa numbers up to twenty. There is an easy way to do these problems using sets.

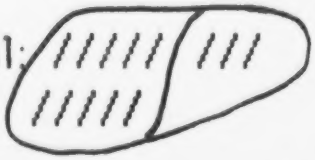
Example: KE-NEM 

\+ ƆWΘ-LO

?

Count the total in both sets: 

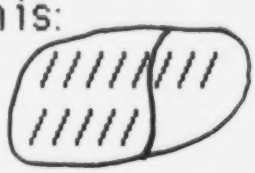
How many groups of ten are there? Mark

the set of ten in the total: 

There is one group of ten and three more. The way to write this in Hupa is

MΨИ-ЯUИ MƱ-O NO TOK
(ten and three)

The answer to the problem is:

KE-NEM 

\+ ƆWΘ-LO

=

Do these addition problems.

```
    XOH-KTT      ///////
+    DTNK        ////
```

=

```
   MT-XOC-TO     /////////
+  TOK           ///
```

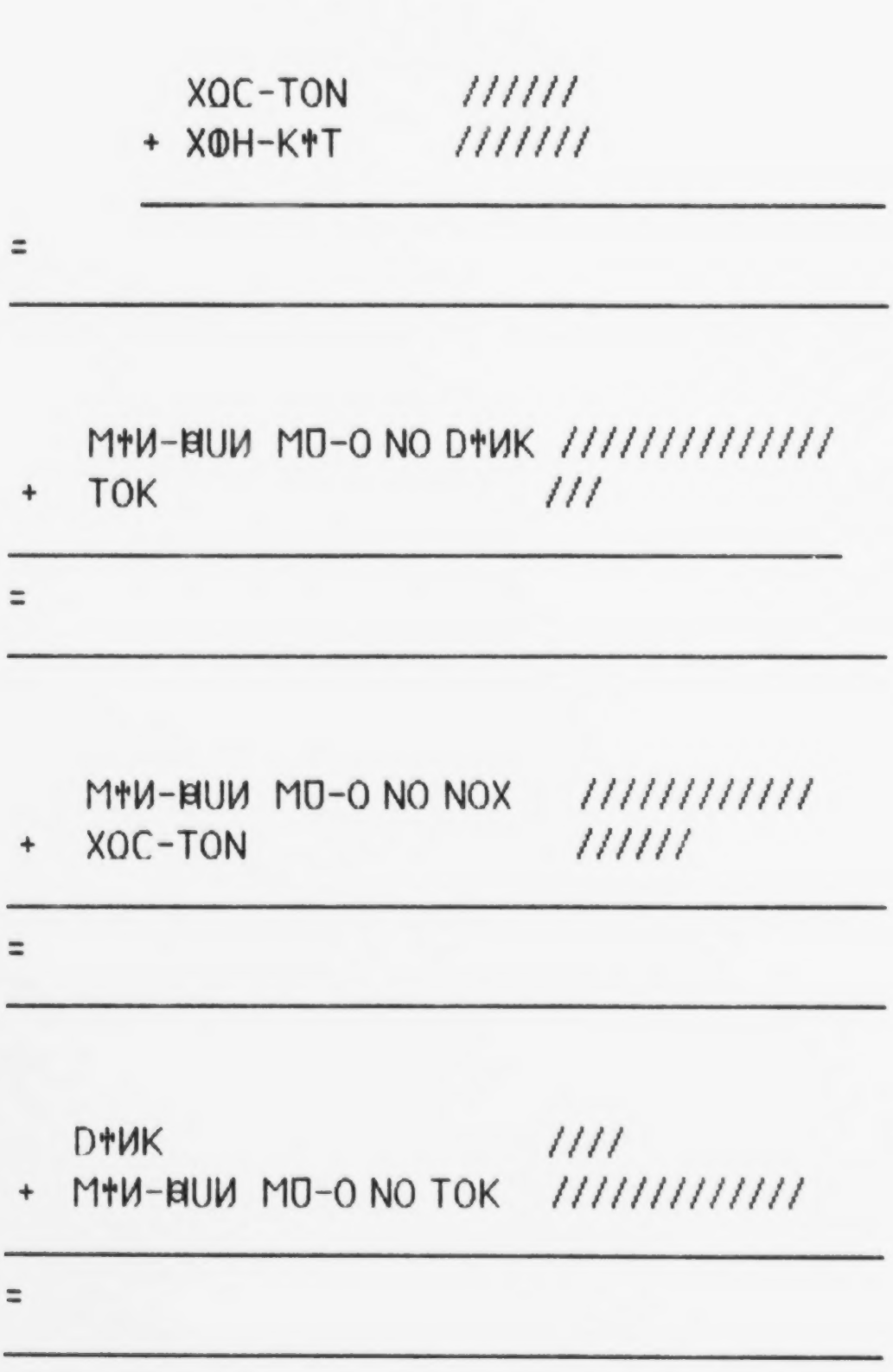
=

```
   MTN-HUN       ///////////
+  JWO-LO        /////
```

=

```
   KE-NEM        ////////
+  XOC-TON       //////
```

=


XOC-TON
+ XФH-K†T
=
M†И-ВUИ MП-O NO D†ИK
+ TOK
=
M†И-ВUИ MП-O NO NOX
+ XOC-TON
=
D†ИK
+ M†И-ВUИ MП-O NO TOK
=

KE-NEM ////////

\+ MIN-HUN MO-O NO NOX ////////////

=

The number 21 in Hupa is made like this:

NO DI-MIN-HUN. MO-O NO HO'

How do you think you would say 22?

How would you say 25?

How would you say 28?

The Hupa number for 30 is

TOX† D†-M†И-ꓭUИ

_____

What does TOX† mean? _____
(It is spelled a little differently when it is used alone.)
What does M†И-ꓭUИ mean? _____

Think about how you made the number 21. How do you think you would make the number 31?

_____

_____

You say 40 in Hupa this way:

D†И-K† D†-M†И-ꓭUИ _____

This is 50 in Hupa:

ƆWO-LO D†-M†И-ꓭUИ_____

See if you can count by tens in Hupa.

10 _____

20 _____

30 _____

40 _____

50 _____

60 _____

70 _____

80 _____

90 _____

The number 100 starts a new pattern. The Hupa for 100 is ꞪO' ꞇ-Dꞇ-Kꞇ N. What does ꞪO' mean?

_____

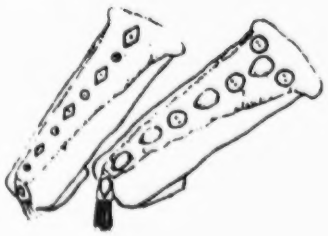
Answers

Numbers 1 - 10

1 One ꓭO'

ꓭO'

2 Two NOX

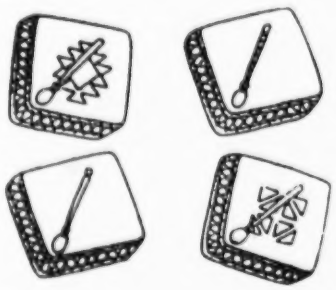


NOX

3 Three TOK

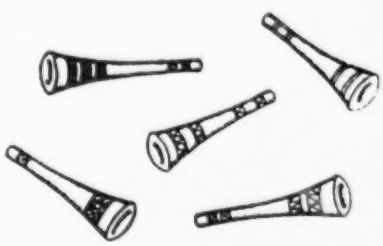
TOK

4 Four D⊦ИK



D⊦ИK

5 Five ƆWO-LO



ƆWO-LO

Practice writing Hupa numbers 1 - 5

1 ꓭO'

2 NOX

3 TOK

4 D+ИK

5 ƆWΦ-LO

Which is bigger TOK or ƆWΦ-LO ?

Write the bigger one here.

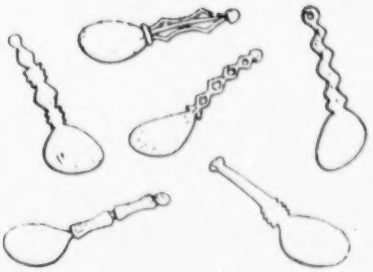
ƆWΦ-LO

Which is smallest, D+ИK or ꓭO' or NOX ?

Write the smallest one here.

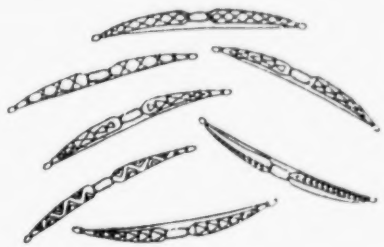
ꓭO'

6 Six XQC-TON



XQC-TON

7 Seven XΦH-K⊬T



XΦH-K⊬T

8 Eight KE-NEM

KE-NEM

9 Nine M⊬-X̄ΦC-TQ

M⊬-X̄ΦC-TQ

10 Ten M⊬И-ЯUИ

M⊬И-ЯUИ

Practice writing Hupa numbers 6 - 10

6 XΩC-TON

7 XΦH-K+T

8 KE-NEM

9 M+-X̄ΦC-TΩ

10 M+И-ΞUИ

Which is smaller, XΩC-TON or M+-X̄ΦC-TΩ ?

Write the smaller one here.

XΩC-TON

Which is biggest, XΦH-K+T or M+И-ΞUИ or KE-NEM ?

Write the biggest one here.

M+И-ΞUИ

Practice writing the Hupa names for these numerals:

1 ⊟O'

2 NOX

3 TOK

4 D+ɥK

5 ƆWΦ-LO

6 XΩC-TON

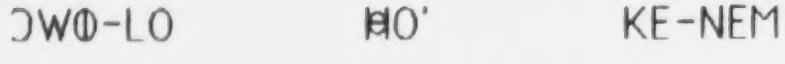
7 XΦH-K+T

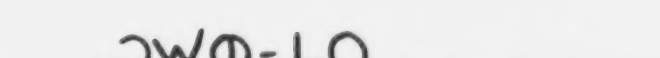
8 KE-NEM

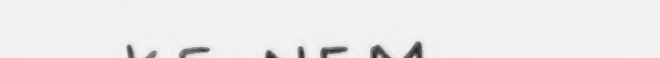
9 M+-X̄ΦC-TΦ

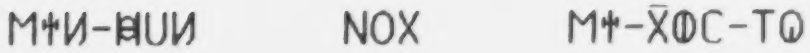
10 M+ɥ-⊟UɥU

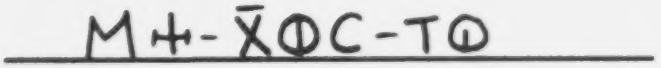
Put these in order, smallest to largest.

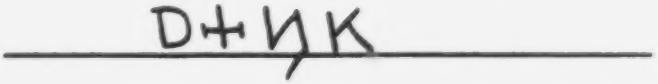


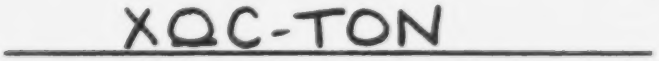


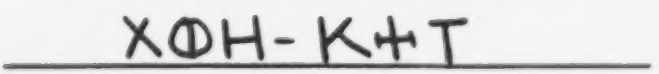








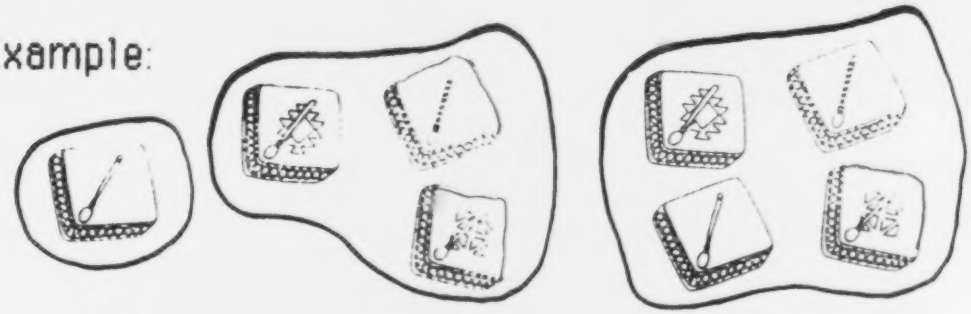




Addition

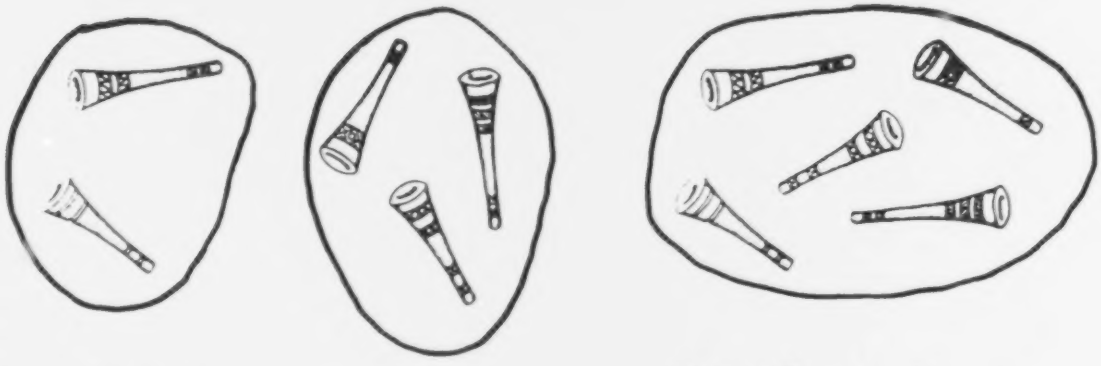
A group of things that you can count is called a set.
Add these sets together, using Hupa numbers.

Example:

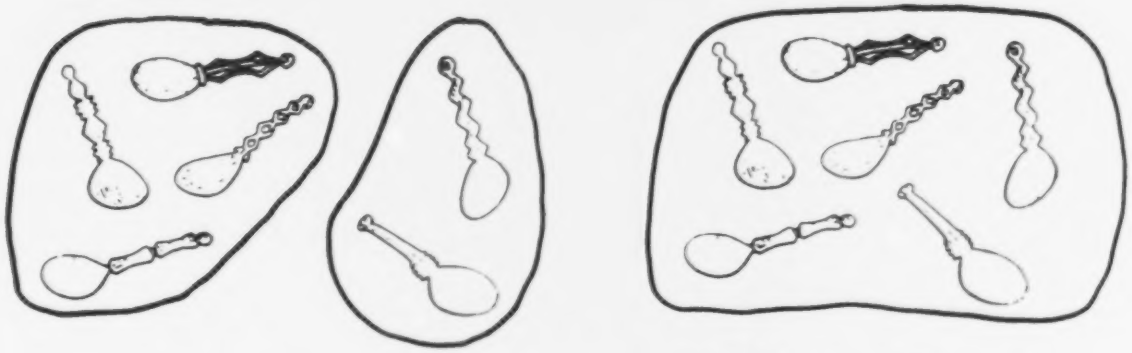


HO' + TOK = D†ИK

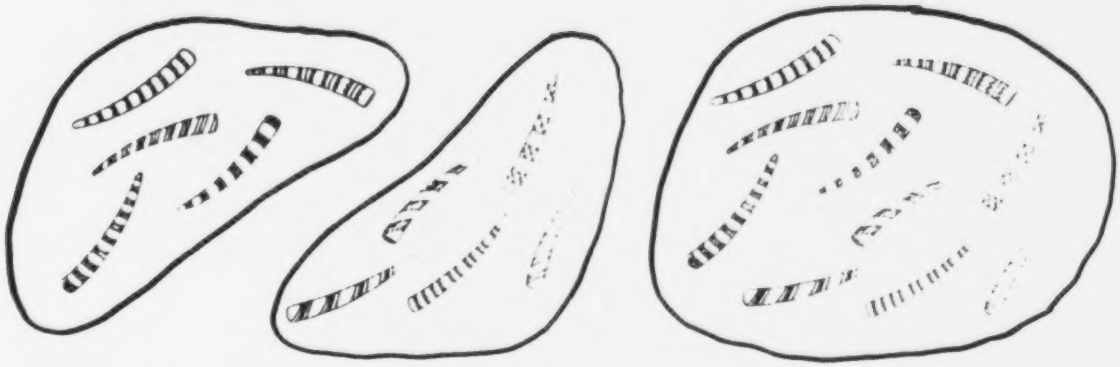
Do these addition problems.



NOX + TOK = ƆWΦ-LO

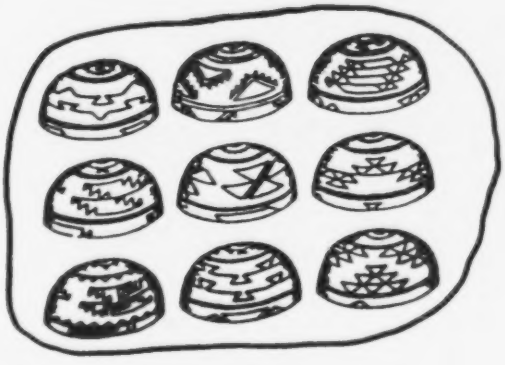


D†ИK + NOX = XQC-TON



ƆWΦ-LO + ƆWΦ-LO = M+Ч-ⒷUЧ

ⒷO' + KE-NEM =



M+-X̄ΦC-TQ

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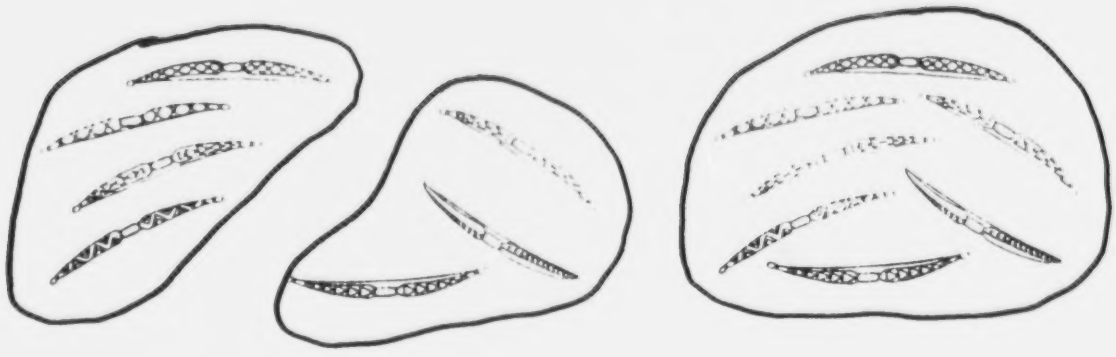
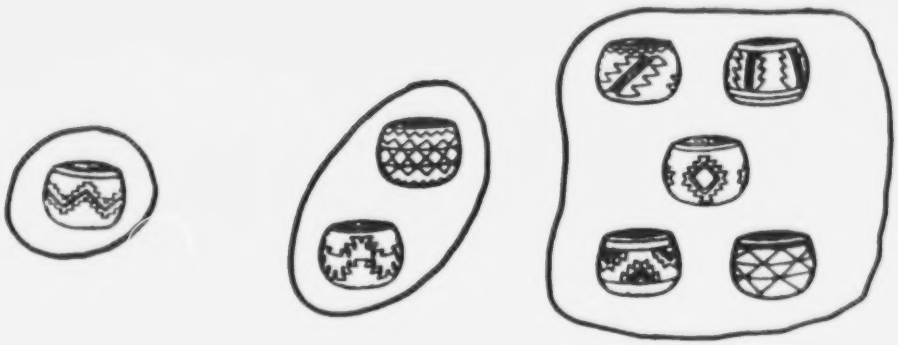


DUCK + TOK = HON-KIT



BIG + NOX + SWORD =

KE-NEM

Make up your own addition problems.

_____ + _____

= _____

_____ + _____

= _____

_____ + _____

= _____

Hupa Numbers 10 - 20

The Hupa number for 10 is M+И-ꓭUИ. To make the number 11 in Hupa, you say M+И-ꓭUИ MƱ-O NO ꓭO' ("ten and one"). Here are the numbers 11 through 19.

11 Eleven M+И-ꓭUИ MƱ-O NO ꓭO'

M+И-ꓭUИ MƱ-O NO ꓭO'

12 Twelve M+И-ꓭUИ MƱ-O NO NOX

M+И-ꓭUИ MƱ-O NO NOX

13 Thirteen M+И-ꓭUИ MƱ-O NO TOK

M+И-ꓭUИ MƱ-O NO TOK

14 Fourteen M+И-ꓭUИ MƱ-O NO D+ИK

M+И-ꓭUИ MƱ-O NO D+И K

15 Fifteen M+И-ꓭUИ MƱ-O NO ƆWƟ-LO

M+И-ꓭUИ MƱ-O NO ƆWƟ-LO

16 Sixteen M+И-ꓭUИ MƱ-O NO XOC-TON

M+И-ꓭUИ MƱ-O NO XOC-TON

17 Seventeen

MɬИ-ꓭUИ MŪ-O NO XΦH-KɬT

MɬИ-ꓭUИ MŪ-O NO XΦH-KɬT

18 Eighteen

MɬИ-ꓭUИ MŪ-O NO KE-NEM

MɬИ-ꓭUИ MŪ-O NO KE-NEM

19 Nineteen

MɬИ-ꓭUИ MŪ-O NO Mɬ-X̄ΦC-TO

MɬИ-ꓭUИ MŪ-O NO MɬX̄ΦC-TO

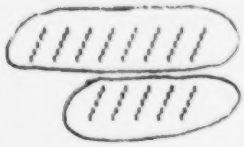
The Hupa word for twenty is NO Dɬ-MɬИ-ꓭUИ. Can you figure out how that number is made? (Hint: how many tens are there in twenty?)

////////// //////////

There are two tens. 2 = NOX

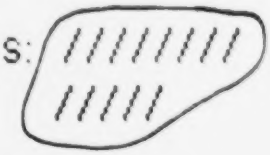
10 = MɬИ-ꓭUИ

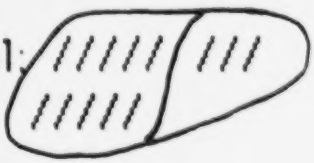
Here are some addition problems which use Hupa numbers up to twenty. There is an easy way to do these problems using sets.

Example: KF-NFM 

\+ ƆWØ-IO

?

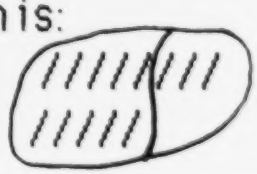
Count the total in both sets: 

How many groups of ten are there? Mark the set of ten in the total: 

There is one group of ten and three more. The way to write this in Hupa is

M+И-ꓭUИ MƆ-O NO TOK
(ten and three)

The answer to the problem is:

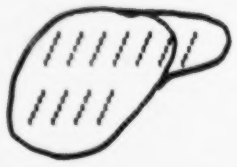
KE-NEM 

\+ ƆWØ-LO

= M+Ч-ꓭUЧ MƆ-O NO TOK 13

Do these addition problems.

XOH-K+T + D+NK

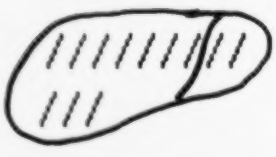


7
4

11

= M+N-BUN MO-O NO BO'

M+-XOC-TO + TOK

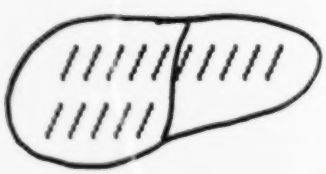


9
3

12

= M+N-BUN MO-O NO NOX

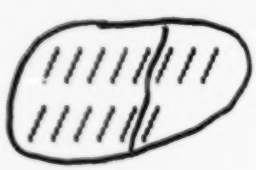
M+N-BUN + JWO-LO



10
5

= M+N-BUN MO-O NO JWO-LO

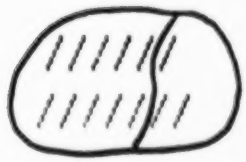
KE-NEM + XOC-TON



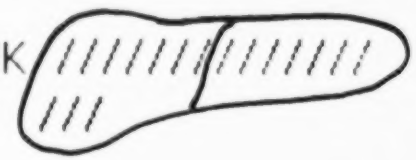
8
6

= M+N-BUN MO-O NO D+NK 14

XOC-TON 6

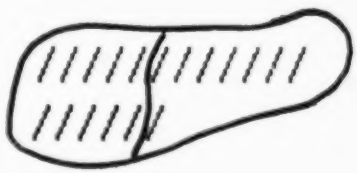
\+ XΦH-K†T  7

= M†И-ЯUИ MD-O NO TOK 13

M†И-ЯUИ MD-O NO D†ИK  14

\+ TOK 3

= M†И-ЯUИ MD-O NO XΦH-K†T 17

M†И-ЯUИ MD-O NO NOX  12

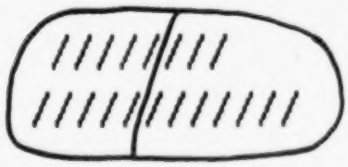
\+ XOC-TON 6

= M†И-ЯUИ MD-O NO KE-NEM 18

D†ИK

\+ M†И-ЯUИ MD-O NO TOK 4 13

= M†И-ЯUИ MD-O NO XΦH-K†T 17

KE-NEM
+ ᎷᏐᏁ-ᏏᏩᏁ ᎷᏫ-O NO NOX  8 12

= NO ᎠᏐ-ᎷᏐᏁ-ᏏᏩᏁ 20

The number 21 in Hupa is made like this:

NO ᎠᏐ-ᎷᏐᏁ-ᏏᏩᏁ ᎷᏫ-O NO ᏏO'

NO ᎠᏐ-ᎷᏐᏁ-ᏏᏩᏁ ᎷᏫ-O NO ᏏO'

How do you think you would say 22?

NO ᎠᏐ-ᎷᏐᏁ-ᏏᏩᏁ ᎷᏫ-O NO NOX

How would you say 25?

NO ᎠᏐ-ᎷᏐᏁ-ᏏᏩᏁ ᎷᏫ-O NO JWᏫ-LO

How would you say 28?

NO ᎠᏐ-ᎷᏐᏁ-ᏏᏩᏁ ᎷᏫ-O NO KE-NEM

The Hupa number for 30 is

TOXɬ Dɬ-MɬИ-ꓭUИ

TOXɬ DɬMɬИ-ꓭUИ

What does TOXɬ mean? 3 (TOK)
(It is spelled a little differently when it is used alone.)
What does MɬИ-ꓭUИ mean? 10

Think about how you made the number 21. How do you think you would make the number 31?

TOXɬ DɬMɬИ-ꓭUИ MO-O NO ꓭO'

You say 40 in Hupa this way:

DɬИ-Kɬ DɬMɬИ-ꓭUИ DɬИ-KɬDɬMɬИ-ꓭUИ

This is 50 in Hupa:

ƆWO-LO DɬMɬИ-ꓭUИ ƆWO-LO DɬMɬИ-ꓭUИ

See if you can count by tens in Hupa.

10 M+Ɣ-ƀUƔ

20 NO D+-M+Ɣ-ƀUƔ

30 TOX+ D+-M+Ɣ-ƀUƔ

40 D+Ɣ-K+ D+-M+Ɣ-ƀUƔ

50 ƆWΘ-LO D+-M+Ɣ-ƀUƔ

60 XΩC-TON D+-M+Ɣ-ƀUƔ

70 XΘH-K+T D+-M+Ɣ-ƀUƔ

80 KE-NEM D+-M+Ɣ-ƀUƔ

90 M+-X̄ΘC-TΘ D+-M+Ɣ-ƀUƔ

The number 100 starts a new pattern. The Hupa for 100 is ƀO' +-D+-K+N. What does ƀO' mean?

ƀO' means 1